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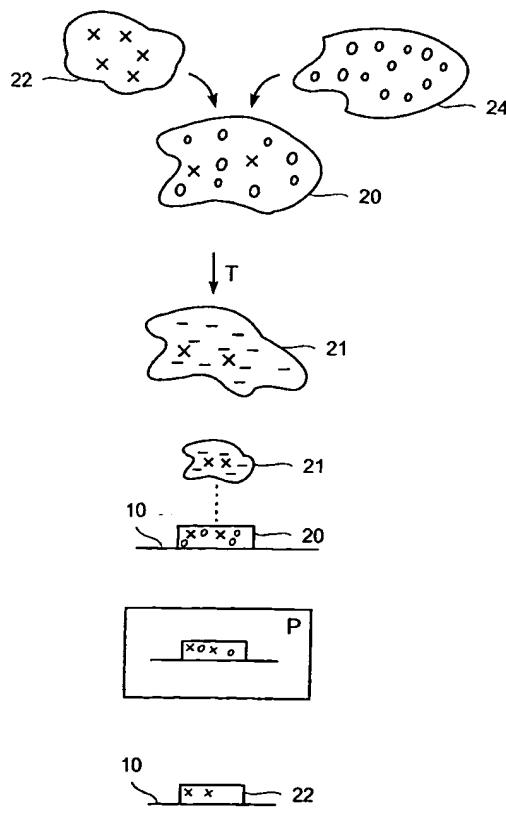
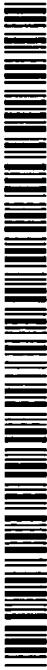
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(54) Title: HIGH-RESOLUTION PATTERNING



(57) Abstract: The present invention describes a method to pattern organic and/or inorganic or biological molecules by a printing technique for the use in semiconductor devices, circuits, sensors, biological patterns, biochips, and displays using these layers. One or more species or mixtures of organic molecules, oligomers or nanoparticles (22) are added to a phase-change transfer material (24). The obtained mixture (20) or part of it is heated (21) to the melting temperature of the phase-change material and deposited onto a substrate e.g. a thin film transistor for a full-color display. The heated mixture (21) solidifies instantaneously when it hits the substrate. The phase-change material is then removed by sublimation and a patterned layer of organic and/or inorganic or biological molecules remains on the substrate. The deposition can be repeated to cast multiple layers on top of each other.

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